

PATHWAYS

Vol. XVIII

AUGUST 1996

No. 3

Robert Slattery, S.J.

REFLECTION

In this series of articles on Integral Pedagogy, at the end of the article on Experience in the last issue of Pathways, I pointed out that an affective learning experience without reflection is not only insufficient but also could be dangerous. This article explores the meaning of reflection, the key element in Integral Pedagogy.

EXPERIENCE → ACTION

I suppose most of us who follow cricket were saddened at the events at the end of the semi-final world cup cricket match between India and Sri Lanka. Towards the end of the match, it became very clear that we would lose the match. Surely a disappointing experience for us. But for some in the crowd, this experience led to throwing bottles and other missiles at the Sri Lankan fieldsmen. Despite pleas from many people to desist from such behaviour, it continued. The immediate result was that the match had to be forfeited to the Sri Lankan. A more long term result may be that the cricket lovers of Calcutta will be deprived of seeing such top class cricket matches in the near future. Why? Because a small minority in the crowd acted without reflection.

This lack of reflection is reported so often. An accident occurs. Someone is killed or injured. The driver of the offending vehicle may or may not be at fault. But he is beaten up, sometimes killed and the vehicle set on fire. Why? Experience → Action. No reflection on the cause of the accident or what benefit

will accrue to the injured person by beating up the driver.

I was in certain town at the time of an important religious festival. A certain experience occurred which was sad for one community. Despite urgent pleas from seniors of that community, some youngsters ran off to try to burn down the place of worship of the other community. The result was communal rioting, scores dead, houses burnt down, curfew for one month. Why? Experience → action. No reflection on the real meaning of a sad experience or what will result from merely reacting to such an experience.

THE CLASSROOM EXPERIENCE

I wonder whether one of the reasons why we lack the ability to reflect on experience is because the experience → action model is the model of most classroom teaching. The teacher teaches facts, principles, information, formulae. The student is not asked to reflect on that learning experience to see what it really means for the child's life. The child is to memorise the facts, principles, information etc. and then repeat them to the teacher in the examinations or in answer to the teacher's questions.

Parker J. Palmer in his book "To Know As We Are Known - Education As A Spiritual Journey" In the chapter "The Teaching Behind The Teaching " puts it well. "With few exceptions, the classes I was in re-

volved around the activity and authority of one person - the teacher. My fellow students and I listened to the teacher's reports on reality or read the reports of other authorities whom the teacher chose and assigned. Our task was to memorise these reports so we could repeat them in exams. The highest level of personal involvement available to us in most classrooms was to ask the teacher questions about the lectures or the readings and to memorise the answers".

MODEL 1 vs MODEL 2

What I have described above, the experience -> action approach, I wish to call Model 1 of teaching/learning. The teacher is the source of all knowledge. He gives this knowledge to the student to learn by heart. Action is memorising, or applying principles in the way the teacher has insisted on, and then recalling this knowledge, or applying these principles in this way, for exams. Not only that, it is obvious that certain knowledge is very useful to memorise. Facts are important. Unfortunately Model 1 suffers from another disease. Much of what has to be memorised is not seen as relevant to the student, and in fact is not relevant. After the exam, it is confined to oblivion as of no use. The learning experience is not related to life. It is the one right answer approach. In life, we know there are many right answers to our problems.

MODEL 2

Model 2 can be described as: experience -> reflection -> action. We have seen in the previous article that the learning experience is meant to be a rich learning experience in which the head, the heart and the hand are involved. The cognitive experience goes beyond memory to comprehension, application, analysis, synthesis, and evaluation. The imagination is brought into play. The feeling level is evoked. The teacher is not the sole repository of the learning experience. He/she is the one who facilitates the learner to actively enter into that experience. So by careful questioning, the learner is led to reflect on the learning experience in various ways:-

What are the assumption in this theory of the atom ?

Are you happy that the atom-bomb has been invented ?

What are the assumptions in this statistical analysis ?

In studying this poem, what interests me ? Why ?

What likely effects might environmental efforts to check the green house effect have on my life; on that of my family, friends ?

How will a more equitable sharing of the world's goods affect me ?

How does what I have just learned make me feel ?

Am I at peace at the end of the day ?

If I were in authority and in a position to make change, the syllabus, what changes will I make?

MORE SPECIFIC EXAMPLES

Let us look at a mathematics lesson in order to see the place of reflection in class lessons or units. We are dealing with cost price, selling price, percentage profit / loss. The teacher can begin by explaining how to do the calculation. If the maths stops there and the students work out various profit/loss sums; then we have experience -> action. But the teacher by contextualising helps the students to reflect. For example, a tradesman buys rice from a poor farmer at Rs.6 a kilo and sells it at Rs.11 a kilo. The poor farmer had spent approximately Rs.5 to produce a kilo of rice.

The teacher then asks the following questions: What is the percentage profit of the poor farmer ? Of the tradesman ? What is the difference in percentage of profit ? (Pure mathematics questions) How do you feel about it ? Does this happen ? What do you think would be a reasonable profit for the farmer ? or the tradesman ? Do other similar things happen in your surroundings and neighborhood ? The student is now being asked to reflect on issues connected with real life.

Or a Geography lesson on dormant, active, extinct volcanoes could lead the students to reflect on why some people do live in active volcano areas, and further on oneself and how dormant, active are you, angry feelings and their effects.

Or lessons on the Independence movement in India, while giving all the facts and main persons involved, could lead the students to reflect on what real difference independence has made to the lives of the 50% of the population that are illiterate.

The teacher is enabling the students to seek answers for themselves, to be aware of their feelings, to see the relevance of their learning experience to their lives and the lives of others. The teacher is enabling the students to build up a habit of reflection.

They are making the knowledge their own rather than accepting passively the information and reflections of the teacher.

Model 2 Faces Deep Down Habits

Habits die hard. So even if the teacher adopts a method in which the students are to actively search for answers, she may get this reaction from students: "Please you tell us. You give us notes. You tell us the answers. Otherwise how can we be ready to give the right answers in the exams?" The teacher herself may be hesitant with this method plagued with the questions, "How can I cover the syllabus?" Even when board exams are many years distant, and she is the one who will set the exam questions, this syllabus problem comes up. And covering the syllabus means basically covering facts, information to be learnt by heart. The syllabus are not the child becomes the centre.

A teacher of 3rd standard social studies / history / geography was faced with this question of covering her syllabus. Fortunately she reflected on the absurdity of ploughing through vast material for the children to "learn". She asked the principal permission to halve the material so that she could help the students to reflect, to search themselves, to imagine, to be aware of their feelings, to see how their learning was connected with their lives. Fortunately the principal was a reflective person and told her to go ahead and cut down the material.

Promoting Reflection

Obviously, questioning in such a way as to get the students to reflect for themselves is one of the main ways of introducing the model 2 approach. In "Teaching Questioning and Learning" by Norah Morgan and Juliana Saxton, Postman is quoted as saying that "all our knowledge results from questions, which is another way of saying that question-asking is our most important intellectual tool". The cooperative learning approach whereby the students and not the teacher are at the centre of the stage and are enabled to search for answers in a small group is another important way to encourage active learning and reflection.

Journaling

The habit of reflection can also be strengthened by a practice called journaling. This can be done for the last five minutes of the last period. In fact, in one school, a warning bell goes five minutes before the final bell. The whole school, from class 1 to class 12, is silent, and in each class, the teacher suggests a question for the students to reflect upon and then to

write in their journal or diary. Or the students may draw a symbol or picture to express their reflection. Or the students may sit quietly and answer the question in their minds and hearts. The question has to be according to the maturity of the students. Examples could be: What new thing did I learn today? What was I confused about today? How do I feel now at the end of the day? Why? How did I feel when I came to class today? Why? Which period did I enjoy most today? What learning was really useful for my life? Journaling can be done every day or at the end of the week or at the beginning of the day at the time of the class assembly. Every school will find what is the best time for journaling.

Reflection Through Silence

Parker Palmer suggests that the introduction of a time of silence even in the middle of a period can help reflection. He writes, in "To Know As We Are Known":

"I also use periods of silence in the middle of a class, especially in an open discussion when the words start to tumble out upon each other and the problem we are trying to unravel is getting more tangled. I try to help my students learn to spot those moments and settle into a time of quiet reflection in which the knots might come untied. We need to abandon the notion that 'nothing is happening' when it is silent, to see how much new clarity a silence often brings."

Surely cultivating an appreciation of silence in a world haunted by noise pollution is worthwhile.

What is Reflection?

We have given a number of examples to explain the meaning of reflection especially in the teaching-learning process. Maybe for those who have a left brain learning preference, it is good to give a more abstract description of reflection. In 'Integral Pedagogy', we read that "in Reflection, the memory, the understanding, the imagination and the feelings are used to capture the meaning and the essential value of what is being studied, to discover its relationship with what other aspects of knowledge and human activity, and to appreciate its implications in the ongoing search for truth and freedom. This reflection is a formative and liberating process. It forms the conscience of learners (their beliefs, values, attitudes and their entire way of thinking) in such a manner that they are led to move beyond knowing to action". And again, we read: "We use the term reflection to mean a thoughtful reconsideration of some subject matter, experience idea, purpose, in order to grasp its significance more fully"... In other words, reflection is the

process whereby we seek meaning for our learning experience.

Another Neglected Element

In the article on Experience, I suggested that the affective learning experience was a neglected element. Three years ago, I was visiting a reputed B.Ed. College. As I had time before the programme, I asked to browse through the library. I asked the librarian to point out the most popular books on learning and psychology. I went through a number of books but could find no book on reflection and in only one book, a mention of reflective thinking which was equated with problem solving and creative thinking. Apparently in B.Ed. courses the area of reflection is also a neglected area !

I was slightly consoled when, on return to Delhi, I came across "The Skillful Teacher" by Stephen Brookfield, in which great importance is given to reflection, reflection by the teacher herself and the need to enable the student to reflect. He writes:

"Despite the frequency with which teachers espouse the principle of praxis, however, in reality it seems that the active component is given far more emphasis than the reflective. Students typically say that teachers rush through masses of content and that assignments designed to assess students' familiarity with this content come so thick and fast that there is

barely time to assimilate new ideas and knowledge, let alone to reflect on these. There is apparently little chance for students to interpret what they are being exposed to in terms of their past experiences or to trace connections between new ideas and perspectives and their already evolved structures of understanding. One of students' most frequently expressed lamentations after finishing a course is that the richness of the experience was reduced so drastically by their being forced to do too much in too short a time. They speak of information overload."

The Challenge

Giving reflection its rightful place in the learning process is the challenge before teachers. It surely is a challenge because of the constraints of syllabus burden (by whom ?), because teaching which encourages reflection may meet with students who are used to being passive receptacles of knowledge, because it will require extra preparation in the beginning, because some of us teachers think our teaching is more important than the students learning, and because in fact it does require a new approach and new techniques. But the rewards are great. Learning becomes relevant to the lives of our students. They and we too build up a habit of reflection. And more and more people with a habit of reflection will build a better, more peaceful, more just world. Provided of course our reflection leads to action. And that is the subject of the next article.

WHAT IS INTELLIGENCE ?

Sherry Burrell

When we speak of "intelligence," we normally mean how well a person can logically figure out the answer, see patterns, retell stories, learn to read, write, compute, or spell. And these skills do in fact represent the two kinds of intelligence - linguistic and logical - mathematical - which are most readily identified in school situations. Yet in his book called *Frames of Mind : The Theory of Multiple Intelligences*, psychologist Howard Gardner proposed that people have different kinds of intelligence.

Mr. Gardner's theory of multiple intelligence makes a lot of sense. It suggests that each child not only learns differently, but already has tendencies for strengths in many areas of intelligence. Children are drawn to and excel in certain

types of activities because they are strong in a particular type of intelligence. As classroom teachers who strive to meet the needs of every child, we can become more familiar with these different areas of intelligence and begin to more actively search for specific children's strengths in each of these areas. We can set up our classrooms with all seven areas in mind.

The following are brief descriptions of how each type of intelligence works and the types of activities children with each type of intelligence seem to enjoy.

You will learn more about it in coming issues of *PATHWAYS*.

TOWARDS AN EMPOWERING PRIMARY (BASIC) EDUCATION

SPECIFIC PROJECT: DEVELOPING AN INTEGRATED CURRICULUM OF LANGUAGE, SCIENCE AND ENVIRONMENT FOR CLASSES I AND II

1. GENERAL INTRODUCTION

1.1 Status Quo The vast majority of our students, in the school system, remains almost totally dependent on the teachers and are given an education that is to a great extent, if not exclusively content-based. This has direct linkage with an examination system that largely tests the ability of the student to reproduce, by rote, the items memorized. Such a very limited acquisition of skills along with the large amount of contents thus accumulated have little relevance and use in the future life and needs of the person. As things are, there is very little of competence developed to understand or to apply because these are not part of the examination requirement, in any appreciable degree. The higher order skills of ability to analyze, to synthesize and to evaluate are rarely taken up in any organized fashion, as an essential part of the process of education and of empowering the person for life and to meet its many challenges and demands. So, the vast majority, in fact, the overwhelming majority, remain dependent and hence powerless. A solution has to be found, if the future of India has to be preserved, since increasingly, the future will lie in the hands of those who can master various levels of knowledge and its technology-linked applications. Else, individually and collectively, we will be left behind. Therefore we believe that Education will continue to remain a major instrument for empowerment.

1.2 As yet, in India, access to Secondary level education remains the privilege of a minority. The vast majority has yet to have access to even a basic level of education. India, as a party to the Universal Declaration of providing Education for All (Thomtien, 90) needs to make special efforts to provide this minimum to the people of India. India, along with 8 other most populous countries renewed its commit to EPA in December, 1993.

1.3 Merely putting them through the normal schooling, is not the answer, since most drop out in the very first years, due to their finding the school transactions un-engaging and boring, because

they are irrelevant and carries, besides, a constant threat of failure in the subjects taught.

2. SPECIFIC INTRODUCTION ON EDUCATIONAL PLANNING GROUP

Educational Planning Group is a very small organization, but with a large vision and perspective. It has been functioning as a Teacher Centre with Mr. José Paul as the Programme Director, and has been with EPG from the start. EPG draws heavily on resources from schools and institutions outside it and hence keeps its basic or core staff lean. There is also a financial compulsion for this. During this period, it has effectively reached not only the schools of Delhi, but also literally schools around the country as well as organizations and agencies that manage a large group of schools such as Kendriya Vidyalaya Sangathan, Municipalities, and several other groups in different parts of India. EPG aims at improvement of the teaching-learning process, better classroom management, better teaching of Mathematics and Science, Value Education, School Climate etc.

During the past two years, EPG has been involved in the development of a more relevant pre-primary and primary curriculum. Towards this objective, it has developed three modules of Teacher Guides for the Pre-Primary. The first 1000 copies have literally gone to schools around the country and have been well received. We have now re-printed the modules. Currently we have in the press both Teacher Guide and Student Workbook for the teaching and learning of Mathematics for Classes I and II, which aim at promoting both intelligibility and understanding, than mere rote work.

The thrust is to assist and contribute to the national goal of providing relevant and empowering primary education for All. We find that we are fully in line with the Government initiative and which has received strong support from World Bank, ODA, European Union and others under the DPEP programme, with the Union HRD ministry and BDCE, having a major role for its management and execution.

Currently the pre-primary books have been produced in English, but we are in the process of having these translated into Hindi and according to the demand, also in some other languages, in order to reach the major target groups, namely schools under the Government management in States like UP, Bihar, MP, Orissa etc. and aided Schools. Lack of funds has held up this project, as we have not yet succeeded in finding an agency to fund the translation and production.

In order to contribute to creating an impact on the educational system, EPG is also planning to develop **Training Packages** which would include print, audio and video media and would train a core set of trainers who will then train the teachers in their own areas. The texts will be so written as to serve as **Distance Learning Material**, or "Teacher in Print" so as to reach a very wide target group. To begin with, these packages will be for effective use of the materials produced or under production by EPG.

3. OBJECTIVES OF CURRENT PROJECT

More immediately and practically, EPG has decided to continue the present research and development work of producing an Integrated Curriculum (IC) for Classes I and II, integrating elements of Primary Science and Environmental Science with Language, in order to produce something of a model for an integrated approach to learning these subjects. We will then avoid the tyranny of too many books introduced too early. (which is the current and widely prevalent practice)

3.1 Some Clarifications about the IC

3.11 Does IC imply that there will be no separate teaching of Language, Primary Science, Mathematics, Social Science, and other subjects in the curriculum but all of them will be weaved, into the IC, including Mathematics? At least in Classes I and II?

3.12 Or does it mean that the different subjects and in particular, Mathematics will remain distinct and separate, but efforts will be made to link a particular subject with one or more of the other subjects, while teaching? Not obviously every subject will be linked each time with all other subjects in the curriculum. That is to say, while teaching, for example Art or Craft, it also becomes a language lesson, through deliberate

design. Language and Play can be easily integrated. Or while teaching Mathematics, some concepts from EVS may also be brought in. And so on.

3.13 Which of the two is the preferred approach?

3.14 A major preliminary exercise has to be undertaken to conceptually classify the Skills or Competencies to be acquired. Will we use Bloom's taxonomy of C A P, namely Skills or competencies related to the Cognitive Domain, Affective Domain, and Psycho-Motor Domain? Or use some other taxonomy, so as to adequately and holistically cover all the Learning Outcomes? I see this as the most critical task. Is this opinion shared?

3.15 What kind of operational strategy to adopt in order to ensure that the curriculum is truly holistic, fully taking into account the scholastic and (equally important) non-scholastic aspects of development? It seems to me that a good strategy to ensure that the curriculum would be holistic and total is to list in detail the various areas of learning. After developing a broad Conceptual Framework for the Curriculum, work will have to be taken up, to put on flesh and blood to the skeletal framework so as to make it go beyond the general categories of C A P and become more specific and detailed under each category.

3.16 Again, in undertaking the task referred to under d, above, namely to provide a blueprint or frame of reference to develop the specific LOs, two approaches are possible (in my view). One is to specify first and separately the skills or competencies in each subject curriculum or learning area (Language, EVS, Art and Craft, Music, Physical and Health Education etc.) and then to integrate these into a holistic total curriculum. (Please note that MLL has listed the skills of competencies separately).

3.17 Another strategy is to attempt to conceive holistically the total learning spectrum and then spell out these Learning Outcomes accordingly, making just references to particular learning areas such as language, science, social science, art, craft, music, physical development etc. while teaching. This second strategy is not only more difficult and challenging than the first but I suspect that it may not easily find acceptance with the teachers, being too radical a departure from the status quo. Do you agree or not? If some kind of force is used, some mutations may

indeed take place, but like the Mendelian peas, they will 'revert to type.' sooner or later.

4. PROJECT SPECIFICATIONS AND OUTPUTS

- 4.1 To research, crystallize and produce an enriched and empowering teaching-learning curriculum;
- 4.2 To train teachers to teach the new and enriched curriculum effectively, so as to enable the students to move progressively towards "mastery learning" and acquire skills and methods to become able to:

- * learn more easily
- * learn better and
- * learn to some extent, more and more independently, as they move to the end of the primary level

- 4.3 To introduce a methodology that is modern and student-active, so that they learn better and more permanently,

- 4.4 Developing a Conceptual Framework Before articulating Behaviourally Specified Learning Outcomes, (BSLO) in the specific subjects and within it, in the different topics for teaching and learning, considerable effort has to be spent on the whole idea of an empowering curriculum. This needs to be spelt out in intelligible and motivating form, so that there is good comprehension, among the participating team members, of the goals and objectives being set before them,

- 4.5 Basic principles of empowerment, in terms of knowledge, skills and attitudes, needs to be spelt out. Effective ways of such empowerment need to be indicated. How does one get empowered, able to stand, walk, run and not easily tire, while learning? The whole question of knowledge as power, skills as means, technology as an instrument, environment (climate) both human and material, as allies, when used well, etc., these and so many other generic issues will have to be identified. This exercise will give clarity to the approach to be adopted.

Since there is still a fair degree of uncertainty about the nature and importance of development of SKILLS in the process of education, a short articulation of skills is made below,

4.6 An explanatory note on Skills

In order to effectively execute the project, a clear understanding of the term Skills as used in the educational context needs to be had. What we are looking for is a narrative description or an expanded definition so that it can be used directly for our work in hand. A Skill can be defined as an ability to perform an appropriate behaviour in an appropriate task or situation, with consistency and precision. Understood in a broad perspective, it is Skill that enables one to combine knowledge, techniques and attitudes which equip the person to deal with the many demands, situations, persons and contingencies of life, whether in developing abilities and attitudes to deal with and live with oneself, live integrated in one's family, (relational Skills) or be able to cope with the demands on the job or with a multiplicity of situations that one encounters in society. Thus either we can take a narrow view of Skills or we can see Skills as lying at the very heart of the educational aim and whose development becomes the key area to focus on in the educational process.

Taking a cue from the work of Howard Gardner on Multiple Intelligences, (refer to his book: Frames of Mind) we can conceive a broad and holistic spectrum of Skills, which will go even beyond Bloom's taxonomy of Cognitive, Affective and Psycho-Motor. It is in that context that we can view and categorize Skills (or what Gardner calls Intelligences) as falling under the following categories:

Verbal or Language Skills;

Logical or Mathematical Skills;

Visual or Spatial Skills;

Body or Kinesthetic Skills;

Artistic and Musical or Rhythmic Skills;

Inter-Personal or Relational Skills;

Intra - Personal or Self - Growth Skills.

That is why development of Skills, viewed holistically, lie at the very heart of the educational goal or purpose and becomes the most critical item to focus on, in the educational process. Can this happen and must this happen

already at Classes I and II ? I think so. Already the infant is biologically programmed to learn. The alternative is to maintain the status quo. That is to say: We do not empower our students for the demands of school and (what is much more important) for the many and new demands from life.

- 4.7 As we did in the previous research projects on the Pre-primary and Mathematics Curriculum, we will spell out Behaviourally specific Learning Outcomes (BSLO) so as to equate in one continuum the teaching, learning and assessment or testing objectives. So the new equation will be: Curriculum = Teaching Objectives = Learning Outcomes = Assessment Criteria. This will also facilitate greater use of co-operative or group learning, as well as make parents and student peers partners in learning.

- 4.8 Developing Teacher Guide and Student work-books

- 4.9 Developing a multi-media Teacher Training package

5. This the basic challenge of this project. Can we do it together? Brain power, we have. Can we also develop the needed commitment to achieve it ? There is no reason to doubt that we will not.

6. AN OPEN INVITATION

EPG has developed and strengthened many academic friendships over the years, with many institutions and individuals, in different parts of the country. We invite you to give some thought to the excitement of making this truly a collaborative project, and thus enrich it, so that we have a product that all of us can be proud of. You can write to Mr. Jose Paul and give your response

MY PROMISE

Mitaly Chowdhury

Oh ! children I will lead you
With all my kind light,
Amidst this world
And lead you on !

I have no satisfaction,
With what I have till now done,
Between you and me, when, there will be good cooperation,
Then studies will be like joy and fun.

I will guide you in the proper path
And try to be your inspiration,
I promise to provide you
With all the possible information.

My children ! I will always look after you,
With all my love and care
In life, whenever you are in need of me
You will always feel my presence there.

CONCEPT MAP

A child enjoys being led by the hand when very young. Soon, he wants to let go the hand and tries to walk on his own legs.

Self learning, namely letting go, at least to some extent, the hand of the teacher and learning to learn, by using the pathways of learning so as to become an independent learner is an adventure in learning. Concept Maps (CM), also called Mind Maps, is one help to see at a glance the several parts or units that go to make up the course or a part of the course and see how each is linked to the other.

Are you interested in knowing more about Concept Maps?

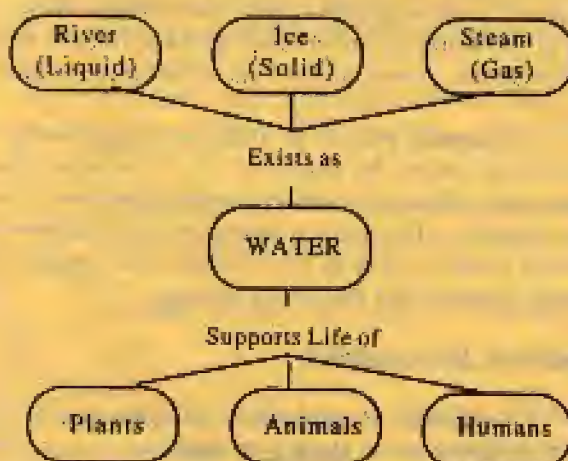
WHAT IS A CONCEPT MAP?

You have no doubt seen a spider's web. Very intricate and nice looking. The web has anchor lines that attach the web to firm points and you have subsidiary lines that link up the anchor lines to the another. The web is a beautifully networked item. There is a total inter-dependence of each part to the other and they all stand together as one piece, flexible and strong.

Concept Maps or Concept Webs, if you like to call them, are similar.

AN ILLUSTRATION

If you have been given the following seven words: river, water, ice, plants, humans, steam, animals, they look rather unconnected till you look a bit more closely and see that all the words can be organised around the key concept of water. So you can draw a Concept Map, like the following adding a few arrows.

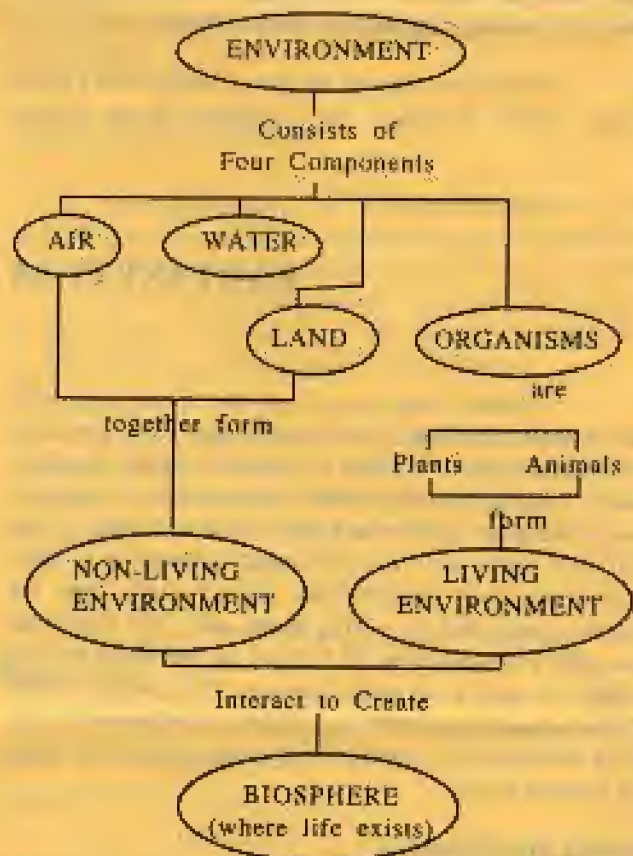


CONCEPT MAP AS A PATHWAY TO LEARNING

Seeing it thus, you can begin to ask questions and see connections: what comes before and what comes after; What is the cause and what is the effect; what is the principle and what is the application etc. Immediately you can see the connection between river and plants or animals or between ice and steam etc.

ANOTHER ILLUSTRATION

Look at the following Concept Map, which is a little more complicated.



LEARNING BETTER AND FASTER

By seeing the whole course or a whole module or unit as a concept map means that you begin to know that there are links between the various parts. During study or by asking the teacher to explain, you also understand the reason why they are linked. There is a good chance that what you understand you will keep and remember. You are helped in your learning and in remembering.

TRY IT ON YOUR OWN

Teaching becomes much more easy and more satisfying, in terms of better grasp of the subject by the students and better mastery and performance, when they are allowed to get into the inner mechanic of the Concept Map or Web of a topic or chapter. So, it would be a good practice to take some time, at the beginning of the lesson, to refer to the Concept Map connected with the topic. Not only the teachers, but also the students will find it a very interesting and stimulation exercise to develop Concept Maps. In fact, some teachers have made it a class exercise and find that the students really get involved in the process and come up with a good final product. The teacher will, of course, have to point out certain anchor lines or key concepts. Then a group exercise and brainstorming or collaborative thinking will produce something that will be happy about.

Then that Concept Mapping, which was a combined effort, becomes the reference point during

the teaching. A variation is to ask some students to develop on their own, or in a small team, concept maps on some topics that they have already learned. This exercise can provide an excellent revision and deeper learning of the lesson.

Still another possibility: A one day or two day staff seminar could be built around this. Through workshops, the teachers, in subject groups could develop Concept Maps. Once developed, these must be made available to the students and through them to the parents as well. It will result in both becoming partners with you in learning the topic better and more permanently, which is, after all, what you want to achieve.

LEARNING TO LEARN

LEARNING THROUGH UNDERSTANDING

LEARNING THROUGH PARTNERSHIP

FANTASY PLAY FOR CHILDREN

Fantasy play is one of the most enjoyable activity for children at their early ages. The potential of dramatic play is great in terms of social development, language development, emotional development, cognitive development and physical development. The children enjoy this activity most because it is their creativity, their imagination, their fantasy they are trying make real by acting them out. No adult can provide dramatic play or fantasy to the child and no adult can take away their fantasy. It is purely theirs. Given proper encouragement, time and adequate space, they will surprise you by the way they learn and grow in various ways.

Social Development

Dramatic play is a great opportunity for children to interact with other children. They experience the role of a hero and that of a non-entity, they take the role of the leader and also the follower. They create ideas and influence others to work with them and as a result develop skills of working together. In this process minor differences opinions and ideas are rubbed together and they learn to develop conflict resolution strategies.

Children learn roles of members of the family and the people whom they experience in their life

by dramatic play "What if I were Daddy / Mummy / Grandfather / Servant". These experiences allow them to explore the world around them and they get a better grasp of concept of family. While pretending through play, they get a better understanding of the sex roles. When they all play together in a drama situation that boys can play with babies to practice being father as much as girls have long practised to be mothers. Boys and girls can pretend to stop for house-hold articles cook foods. Children are learning important family cooperation. When the play centre is having children of multi-cultural, multi-religious, multi-regional origin, they widen their vision of the world by understanding the variety of make believe foods, rituals and norms of different cultures.

Dramatic play is an important opportunity to learn about society by exploring the roles of postman, police man, doctor, nurse and other community service people. The social awareness is encouraged through dramatic play as the children learn about self, family, country and the world around.

Language Development

Language development will take place only when children get a chance to talk and listen. The planning of the dramatic play itself is an opportunity

for children to share their ideas and influence one another. The children get a chance to use their language ability to use meaningfully to express their ideas and opinions. The possibility of language development is maximum in such a situation.

Emotional Development

Dramatic play provides children with lot of meaningful experiences of expressing their inner feelings which they may not be able to do in real situations. Through play they can also master the control over their emotions as they explore a variety of methods for expressing their feelings.

Power is something which every one is crazy after. Even the child long for power. But in real life they does feel powerless and get disheartened. This is compensated to some extend by fantasy play children try to grasp how it feels to be a powerful as a parent, a wild animal, a police man, a super hero or a doctor.

Fantasy play is a non threatening experience for children. In fantasy, there is nothing as good or bad, there is no right way or wrong way of fantasising. So the children don't fail in fantasy. They experience success and build self confidence and self esteem. In a fantasy play there is no judgement of the play. So the children experience a sense of acceptance for who they are.

Working together children, enjoy that they are being accepted and their ideas are liked by others. They build a self assurance and pride in themselves.

Fantasy play is a great stress reliever. Fantasy play is relaxing, fun and enjoyment. The children

in our schools have a right for enjoyment. Don't withhold, give them a chance to have fun every day.

Intellectual Development

Creativity, ability to express ideas, decision making, problem solving, express feelings, vocabulary are some of the by - products of fantasy play. A fantasy play is the result of creativity. Children when they create the plot for acting, when they use imaginative props and so on are in the process of creative action. In a collective activity of this kind, at every stage either in the stage of creating the plot or in the stage of trying out to act or in the case of selection of plots roles etc. innumerable situations for decision making and problem solving arises. Themes and plots have to be continuously revised as they are involved more and more. Learning to express in words their ideas definitely help them to build new vocabulary.

Physical Development

Depending upon the plot the children are creating, the chances of physical development is present. If they decide to have a police chasing a thief, a circus scene, an animal chasing other, pretending to be gymnast or dancer or artist are all ways of helping the large muscle and fine muscle coordination.

Since you are aware of the educational potential of creative drama or fantasy play for children. Just say to the children "Let us pretend" and join in with them and have fun and come out of it as an enriched person yourself.

CLASS ROOMS

This is where freedom, responsibility self - discipline and consideration for others are learned by having to be practiced all the time.

A place that accommodates the full range of individual differences - where individuality is richly prized and given full expression.

A place that provides abundant opportunity to develop intellectually - in the way children naturally acquire powers of thought and logic through their own action.

It is where all children learn respect and trust, by being treated with respect and trust.

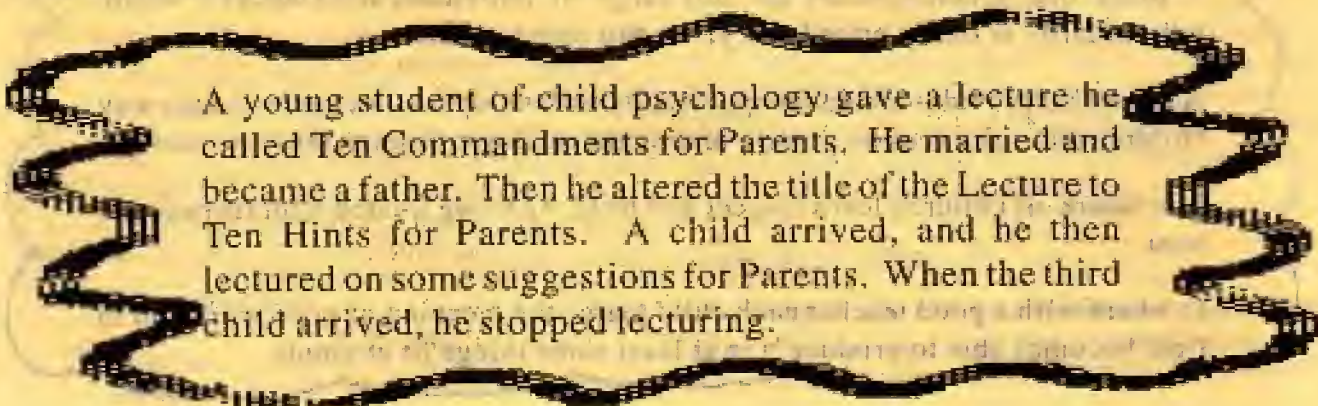
Is where with a good teacher each child learns the meaning of good work and in time becomes able to produce it in at least some things he attempts.

DEVELOPMENT AND TRANSACTION OF A CURRICULUM

Curriculum, or carriageway, in the Roman days, referred to the rutted pathways that the chariots used for travel. The ruts helped the chariots to stay on course. Today's equivalent would be the rails that the trains use to stay on course.

Curriculum, in education, refers to the totality of experiences, activities and contents of the syllabi of various courses and programmes that, taken together, help the student to reach the personal and the larger (social-national) objectives of education. Curriculum, therefore is holistic in its concept. Hence we can make certain summary statements about the curriculum, such as the following:

1. Curriculum is the instrument to **prepare persons for life.**
2. Curriculum helps an individual to **root oneself into the community**, the society, the culture and ethos of one's country and through this process, also become linked to the international community.
3. Curriculum helps the person to become a contributing member of the community and society, through acquisition of the necessary **knowledge, attitudes and skills for life and for living.**
4. In a narrow and short-term perspective, curriculum enables the student to pass from one stage of education and development to another, to pass the examinations of the class and of the Board, in order to get equipped to face the tougher examinations of life.
5. Curriculum, therefore, has to retain **currency and relevance** with reference to Knowledge, Attitude and Skill inputs.
6. In the actual transaction of the curriculum, the holistic view and objectives of the curriculum have to kept in mind, taking into account, the **developmental stages and needs of the child, and the status and conditions of the society and country, of which he/she is a member.**
7. Curriculum has two essential parts, both of which together make the whole:
 - (a) the **academic curriculum**, which is formally tested and
 - (b) the **non-scholastic or general developmental contents of the curriculum**, which are often not formally tested.
8. In order that the curriculum becomes a **developmental curriculum** than be narrowly examination oriented, the curricular objectives that are specified should form the real teaching curriculum for the teacher and in turn becomes also the learning curriculum for the student and finally the same becomes also the actual basis for evaluation. Hence there cannot be assessment of one part of the curriculum and not of another equally essential part.
9. In order to effectively transact the whole curriculum, students must engage in **active learning**, which calls for constant interaction between students and teachers and with the learning materials.
10. The curriculum is transacted as effectively within the classroom as outside it, and both formally and informally. **It is the quality of the mix that is relevant.** The quality of a good teacher (and of her classroom) as also the quality of a good school lies in the right mix between informality and formality.



A young student of child psychology gave a lecture he called Ten Commandments for Parents. He married and became a father. Then he altered the title of the Lecture to Ten Hints for Parents. A child arrived, and he then lectured on some suggestions for Parents. When the third child arrived, he stopped lecturing.

COOPERATIVE LEARNING

Five years ago, my students figured out mathematical problems independently while I circulated around the room, providing help as needed. Today, the children in my combination second - and third - grade classroom investigate mathematics in cooperative learning groups. They explore ideas, talk over their strategies, and question each other. They learn that answers come from many sources and that there is more than one way to arrive at a solution.

Cooperative learning in mathematical class also helps students develop independence and self-direction. As children learn that they can share their ideas in an atmosphere that supports their learning, they become active participants in the learning process.

Cooperative learning is a powerful instructional strategy - but it's not always easy to implement. Here's how I've made it work in my classroom.



Choosing Groups

We use a deck of cards to choose partners. I pull out the four 2s, four 3s, and so on - enough cards for as many students as there are in my class. Students take turns drawing cards and going to tables labeled with the corresponding numbers. The children with cards of matching colours are partners.

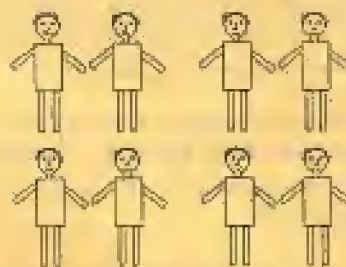
In the beginning, students often complained about their partners and asked to choose again. I took their complaints seriously. We had a long discussion, and they decided to get on how to pick partners. But just before the vote, somebody posed a good question: "What happens if nobody picks you to be a partner?" Eventually, students realized it would be better to keep the pairing impartial, so we still draw cards. Some students continue to complain, but because this was a whole - class decision, they don't complain as vehemently as they did before.

Keeping the Peace

Do things always go smoothly in a cooperative mathematical classroom? Of course not. Sometimes certain partners spend the entire mathematical time disagreeing. For instance, Carlos and Juan Tomas repeatedly came to me individually to complain about each other. The first time, I listened to them explain the situation. From then on, I merely reminded them that they had the power to settle their differences by talking and listening to each other. I reminded them that I could not do this for them. Carlos and Juan Tomas finally worked out a solution.

Role Laying for Smooth Sailing

No doubt about it: Cooperative learning groups can be a mess. That's why it's necessary for all children to understand where mathematical materials



are stored and why they must put them away properly after each activity. Before we begin an activity, I role play with a student partner how to get and use the necessary supplies. Next various partner groups role play the same situation for the whole group. At this point, groups are ready for free exploration of the concepts and materials of the day. We repeat this procedure for each new concept.

During the early stages, I find it helpful to bring students together several times to role play specific concerns - sometimes children talk too loudly and disturb others; sometimes kids need strategies for deciding which partner will read or write first; and sometimes they need to be reminded that manipulative are important learning tool that need to be handled with care.

I used to worry that we were spending too much time role playing and not enough time doing mathematics. Then I realized that our goal is not to finish all the activities; our goal is to develop mathematical thinking and independence.

PATRICIAL JIMENEZ WEAVER is a combination second - and third - grade teacher.

PRE PRIMARY EDUCATION OR PRE PRIMARY TORTURE

THE GUIDELINES.....

1986 - NATIONAL POLICY ON EDUCATION identifies Pre Primary Education as an important area in education, recommends play way method only, strongly discourages formal educational methods in Pre Schools.

1991 - NCERT recommends to abolish entrance tests, and formal educational packages prevalent in most of the nursery schools.

1987 - Major recommendations of a some State Committees on Pre Primary Education are :

- i. Pre Primary Schools should have sufficient area with adequate open space for outdoor play, and play materials to keep children occupied.
- ii. Maximum children to be restricted to 30 per class with one trained teacher, and one helper or Aya for this 30 children.
- iii. No formal teaching / use only play way methods to introduce age appropriate ideas about science, numbers, language and general knowledge.
- iv. Activities to enhance social behaviour, creativity, environment, consciousness, inquisitiveness etc.

Activity Curriculum should include : Free play indoor and outdoor, organised play, guided activities like informal talk, actions-songs, dramatics, story telling, puppet play - all these can be utilised to introduce age appropriate ideas about science, numbers, general knowledge.

MAKING A PRE SCHOOL CHILD WRITE ON PAPER IS UNSCIENTIFIC & CRIMINAL. BILINGUALISM AT THIS AGE GROUP IS NOT RECOMMENDED.

TRYING TO SUPPRESS EXPRESSION THROUGH VERNACULAR TO ENABLE THE CHILD TO READ AND WRITE ANOTHER LANGUAGE IS DAMAGING FOR THE CHILD THINKING PROCESS.

Some children develop recurrent physical illness due to stress, getting better once they are out.

Majority of K.G. children start to school by 8 a.m. Imposed getting up at early hours, imposed excretions, and a breakfast when they are not really hungry and a long travel. A rhythm set at an inappropriate age.

Majority of K.G. children have desk work, very little play and the worst some of them have home works.

Many of these children had start showing temper tantrums, clinging to parents, bed wetting, suffer pain in hands, back and shoulders due to too much of desk work.

The sad part is that the entire first year of work as laid down for primary schools in national curriculum has been brought forward by full year.

NEW ROLES OF PRE SCHOOL EDUCATION

A society fast changing - more nuclear families, both parents working, communication within family diminishing. Space limitations due to the nature of new shelters like flats, and the houses built in small areas. Limited interaction between children outside schools. Pre Schools now will have to compensate for deficits in houses due to social changes. In the interest of growing child and the society Pre Schools may please forget academics and concentrate more on social and emotional development of the little ones.

Father to his college son, dressed in the latest campus style, 'You look like a fool'.

Just then a neighbour approached who obviously was glad to see the boy, saying, 'Rakesh, you are getting more and more to look like your dad'. Son, dryly, 'My father was just telling me'.

SOME LESSON DESIGNS FOR REFLECTION ON LIFE SITUATIONS

1 CLASS IV

Topic :- Meaning of fraction.

Objectives :- Knowledge and skill.

To enable the students :-

- a) to divide a unit into various equal parts and identify each as a fraction of the whole
- b) to represent fractions in terms of
 - i. concrete objects
 - ii. graphically
 - iii. abstract symbols.
- c) to read and write fractions.

Values :-

1. To make the children aware of the need to divide their time and resources in right proportion.
2. To make the children reflect on the gap between the rich and the poor in their locality.

Experience :-

1. Form families of 4, 5, 10, 12 respectively in the class and give an apple to each group for sharing equally.

Children observe the size of a piece in each group and comment on it.

2. Children cut out circles and rectangles and shade one half, a quarter, three quarters etc.
3. Divide the class into 2 equal groups, 3 equal groups, 4 equal groups etc. and express each as a fraction of the class.
4. Teach the children to read and write fractions.
5. Explain the meaning of denominator and numerator in each situation.

If a loaf of bread each is provided to two families, one of 6 members and another of 12 members. What fraction of the loaf of bread will a member of each family get. Show it diagrammatically. Identify the denominator and the numerator. What do you feel about the size of a slice ?

The monthly income of Reena's family is Rs.24,000- and that of her servant Shanker's family is Rs.1800/- Both families spend different fractions of the income on food, on clothing on education on medicine and on house rent. Calculate the actual amount spent on each item by the two families.

	Spends				
	Monthly income	Food	Rent	Clothing	Medicine
Reena	24000	4000	4000	1000	1000
Shanker	1800	1000	300	100	50

Use a circle to express your answer in terms of fractions and actual amounts.

Reflection :-

1. What fraction of your pocket money do you spend ?

- a. on yourself
- b. on other family members
- c. on the poor.

are you happy with your division ?

2. What fraction of your time do you spend ?

- a. for studies
- b. for games
- c. for T.V. programme
- d. for sleeping
- e. for prayer

Draw bar graphs to express your answers. Form groups of 5 and share with your group your answers.

Action :-

Do you like to make any changes in your divisions ? Why ?

Cut out a strip of paper. Divide it into 24 equal parts to show the 24 hours of the day. Use

different colours to shade the divisions that represent the time spend on :-

1. study
 2. play
 3. sleep
 4. prayer
 5. T.V. programme
 6. helping other
 7. for others
- b. Find out from your parents - the total family income - what fraction of the family income is spent :-
- on your education
 - on the poor
 - on the family itself
 - on other items

Do the same with the family of your servant after seeing the amounts what do you suggest to your father ?

II CLASS IX

Poem :- Sympathy by Charles Mackay

Aim :-

Knowledge and skills, create a taste in poetry, increase vocabulary, learn rhyming and poetical use of language.

Values :-

Kindness, care for one another especially

there who are in need and those who have no one to take care.

Experience :-

Begin with a role play where a rich man drops a coin to a man who is sick and paves his way and in another scene where an ordinary man comes across a sick man. He sits with him, takes care of him and spends time with him. After the role play a few questions will be asked such as whose part do you like to talk - the rich man or the ordinary man ? Why ? What difference do you find in their actions ? If you were in that person's place who was in grief and sorrow how do you feel ?

- b. The teacher reads the poem with proper stress, flow, rhythm and meaning.
- c. The teacher interprets difficult words, phrases and lines. In our modern society we are so busy and money minded that we have no time for others.

Reflection :-

Give the students 2 or 3 minutes to reflect on the theme they understood and they will be asked to recall if they had any experience of being cared by others and how they felt. They will be asked to recall any experience where they cared for others. Their experience will be shared in the small groups.

Action :-

Why is it in your opinion sympathy is far greater than gold ? Write it in your own words and share in the group. To think of their own house maids and when they go home to give time for them to share their concerns and difficulties. To make a visit to local govt. hospital where the sick people get very little care.

We find that we are looking for
for that's the way life goes on
So do not look around for trouble,
faults and flaws and foes
Look for beauty and form,
see them every day
You will find them now
Like the flowers all along the way.

Composed and Published by Educational Planning Group, 4 Raj Niwas Marg, Delhi 110 054
Printed through Newton Jacob, Publishing Consultant, 207, Garg Plaza, plot No. 4, Gulabi Bagh,
Local Shopping Centre (Near Shakti Nagar Rly. Bridge), Delhi - 110 007 Phone : 7226906 Pager : 9628002771